

ABSTRACT OF THE DISCLOSURE

A memory space of a memory cell array is previously divided into a plurality of sub memory spaces. A refresh control circuit executes control of performing
5 refreshment of information to the sub memory spaces are in use at the time of the refreshment of the information and need the refreshment among the plurality of sub memory spaces, and the control of not performing the refreshment to the sub memory spaces which are not in use
10 and do not need the refreshment.